

LENDERS

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(54) Packages containing food to be cooked therein

(57) A food package for use in a method of cooking comprises two open-mouthed containers 4, 6 (Figure 1) or 302, 304 (Figure 6) each containing a food component and able to assume a storage condition as shown in which respective interiors of the containers are each releasably sealable from the atmosphere, and a closure condition in which the second container 6, 304 overlies and is supported by the first container 4, 302 with the container mouths confronting one another whereby the second container partly or wholly covers the mouth of the first container. In Figure 1, second container 6 is inverted in the closure condition whereas, in Figure 6, second container 304 and a further, similar container 306 are folded over on top of the first container 302.

The method of cooking comprises

(1) removing the sealing means from the first and second containers;

(2) arranging the containers in the said closure condition so as to allow emptying of the food component in the second container into the first container; and, when the containers are in the closure condition,

(3) subjecting the food components to a cooking operation by applying to the package heat or microwave radiation.

The food component initially in the second container may be a thickened sauce material adhering to the internal surface of the container.

Fig.1.

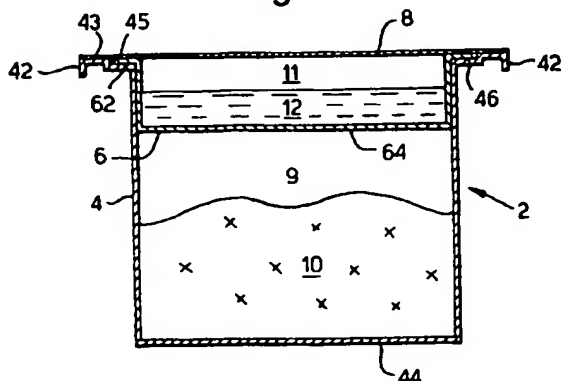
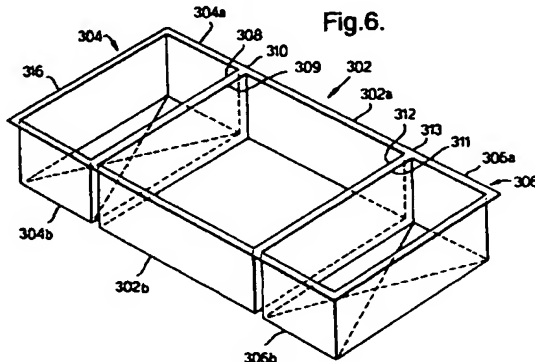


Fig.6.



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Fig.1.

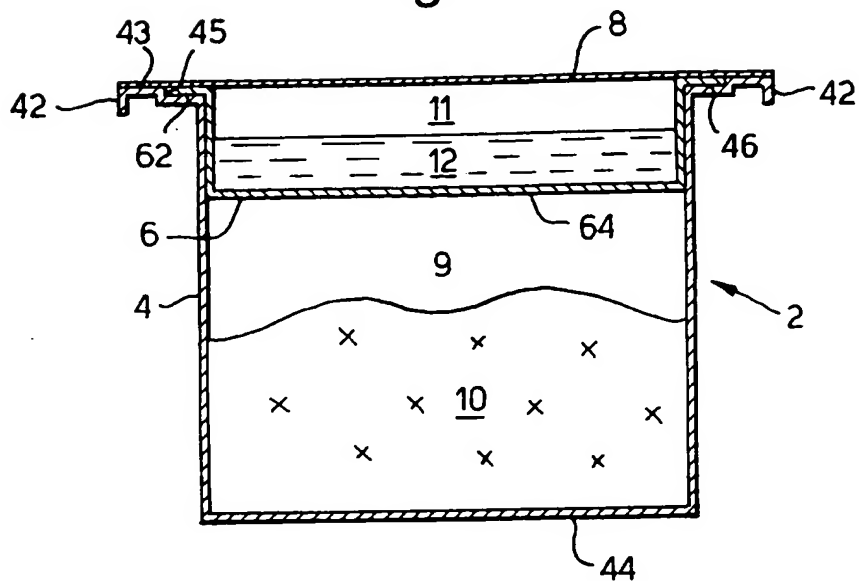
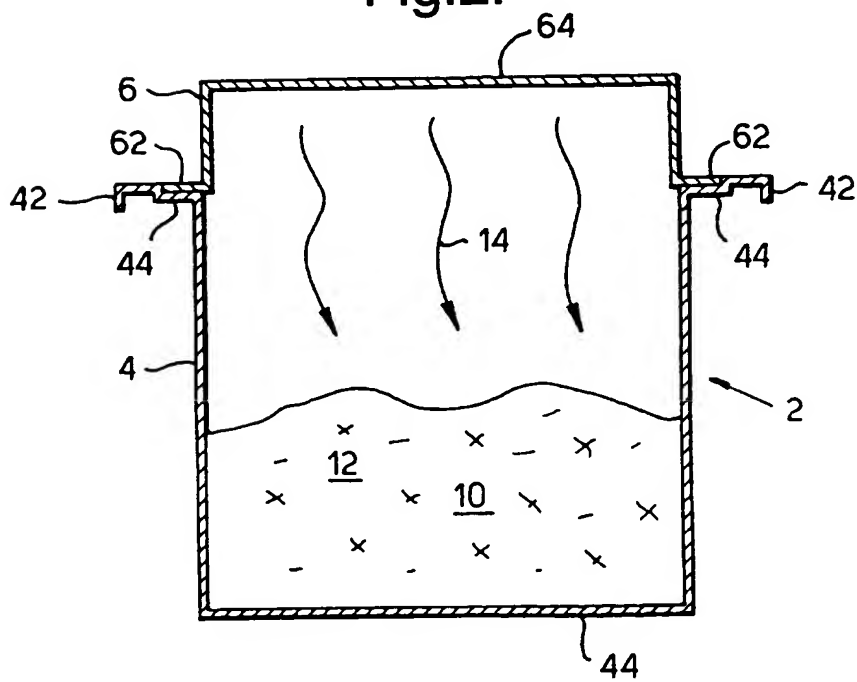


Fig.2.



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Fig.3.

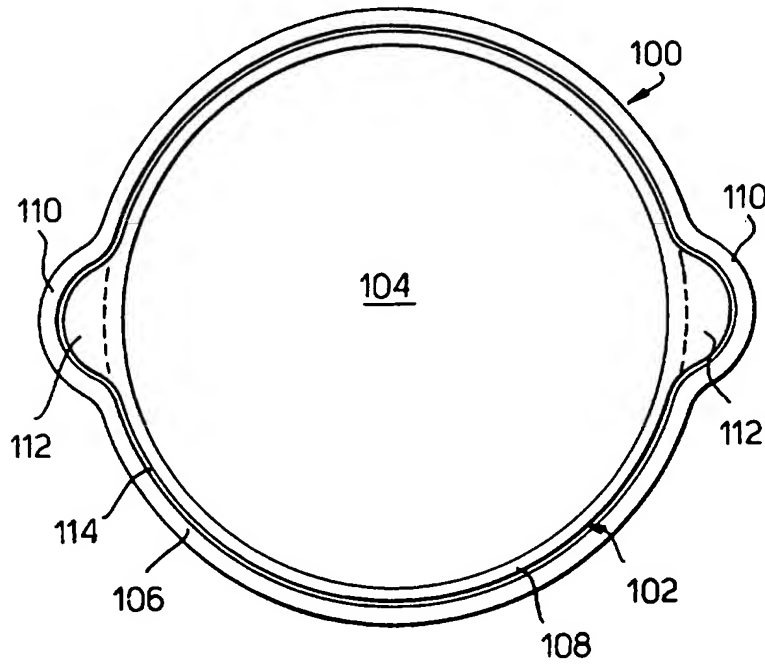


Fig.4.

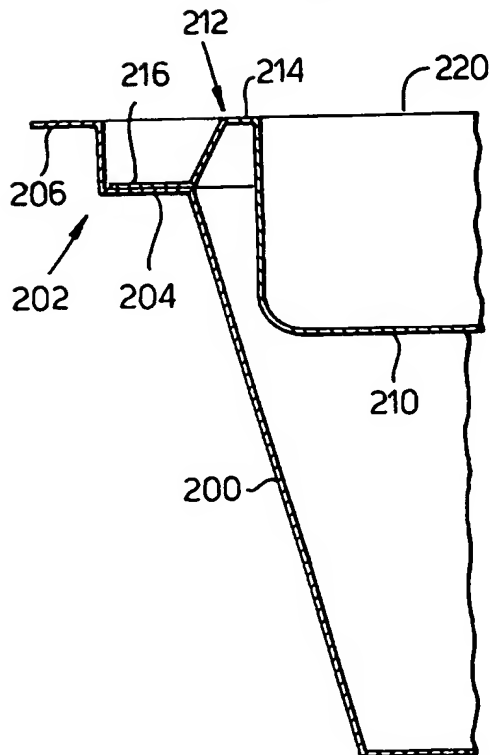


Fig.5.

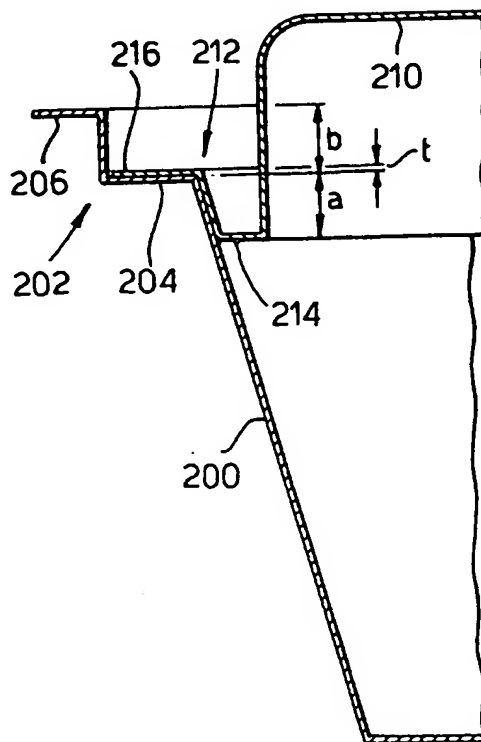


Fig.6.

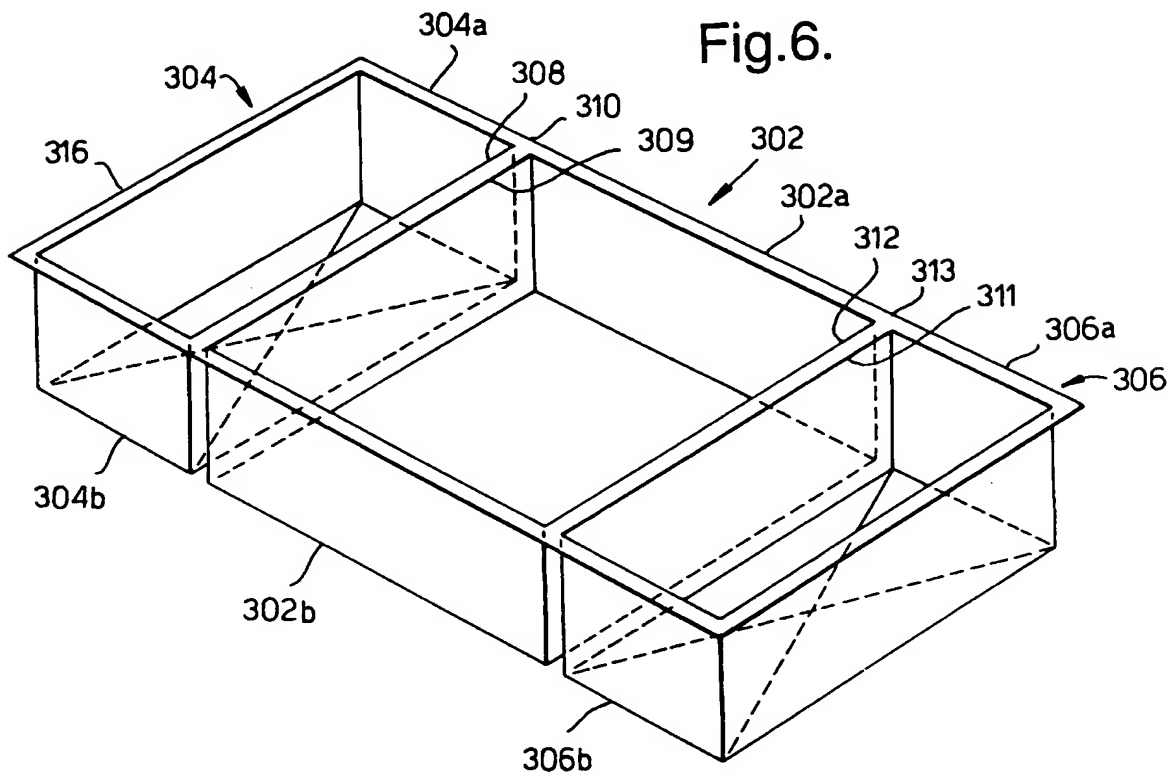


Fig.7.

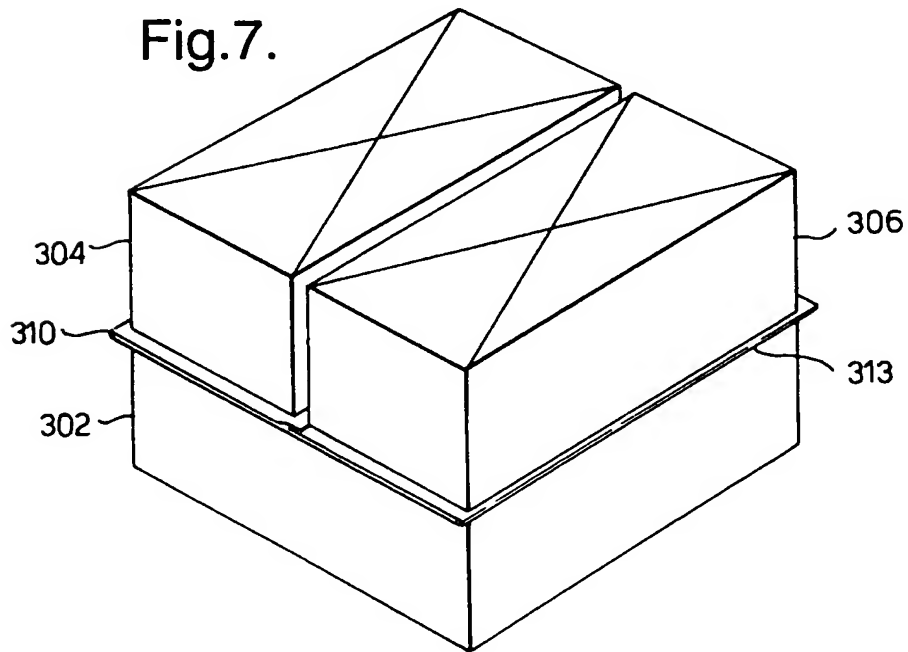


Fig.8.

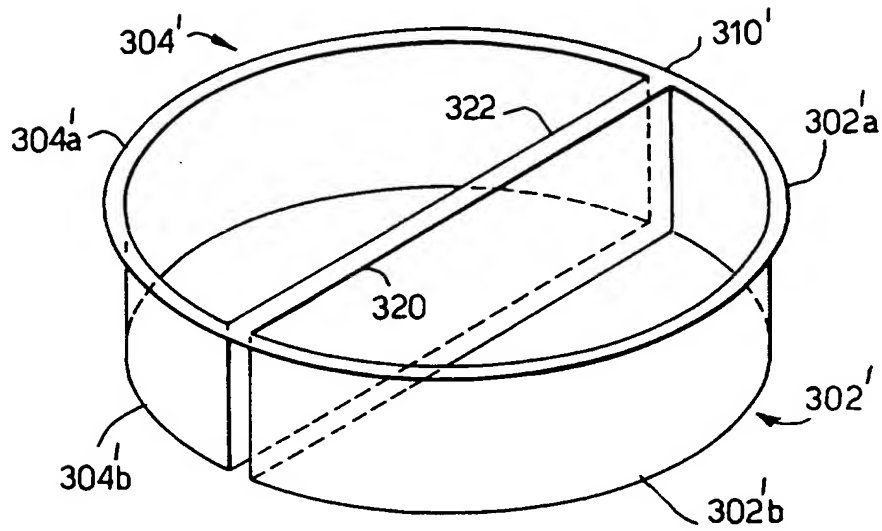


Fig.9.

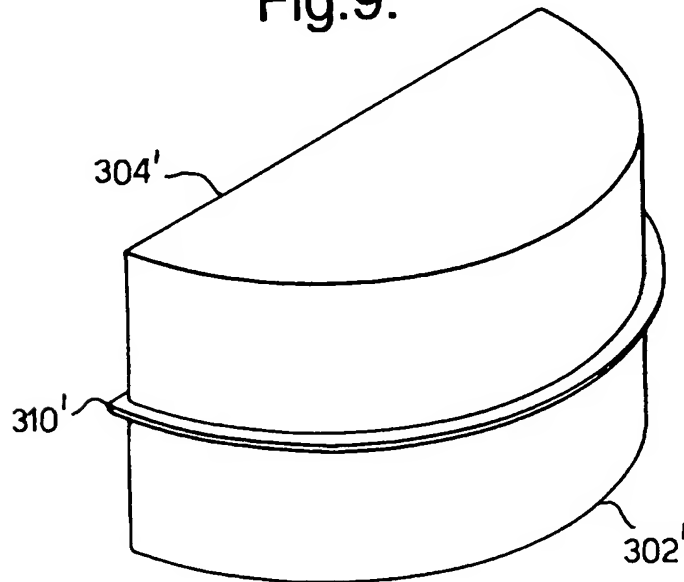


Fig.10.

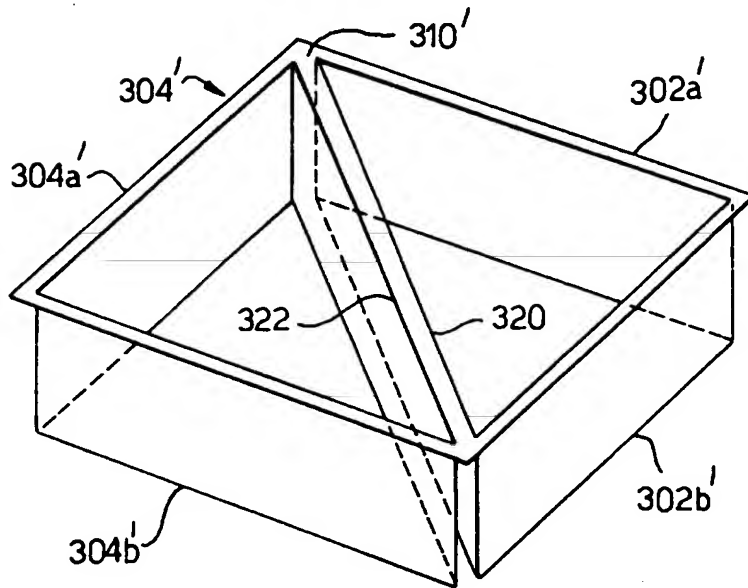
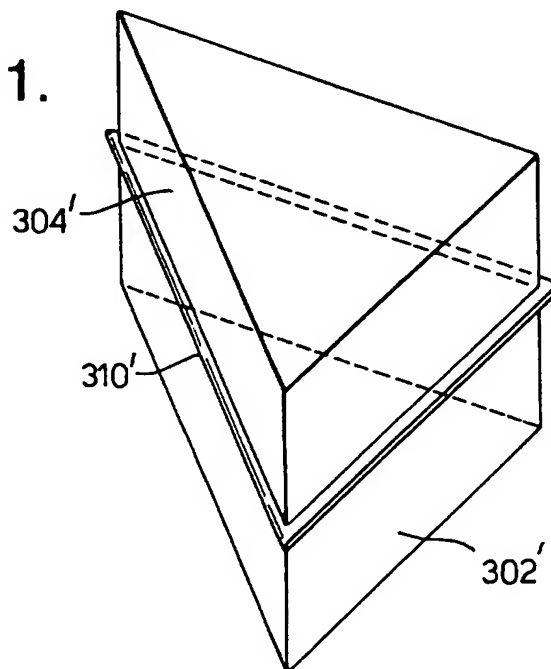


Fig.11.



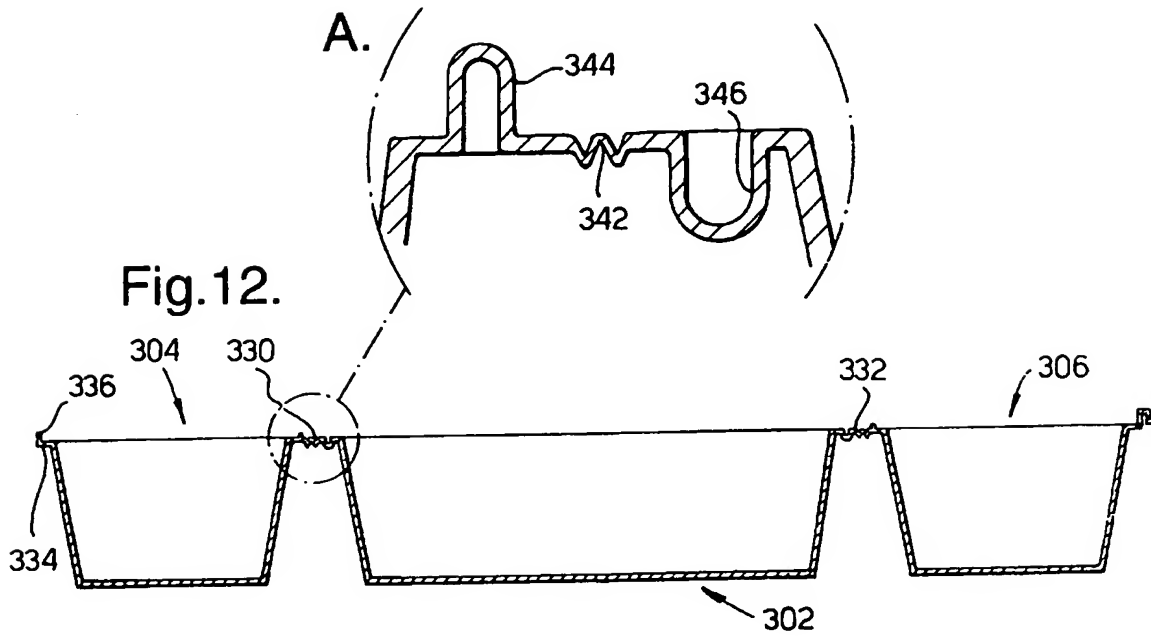
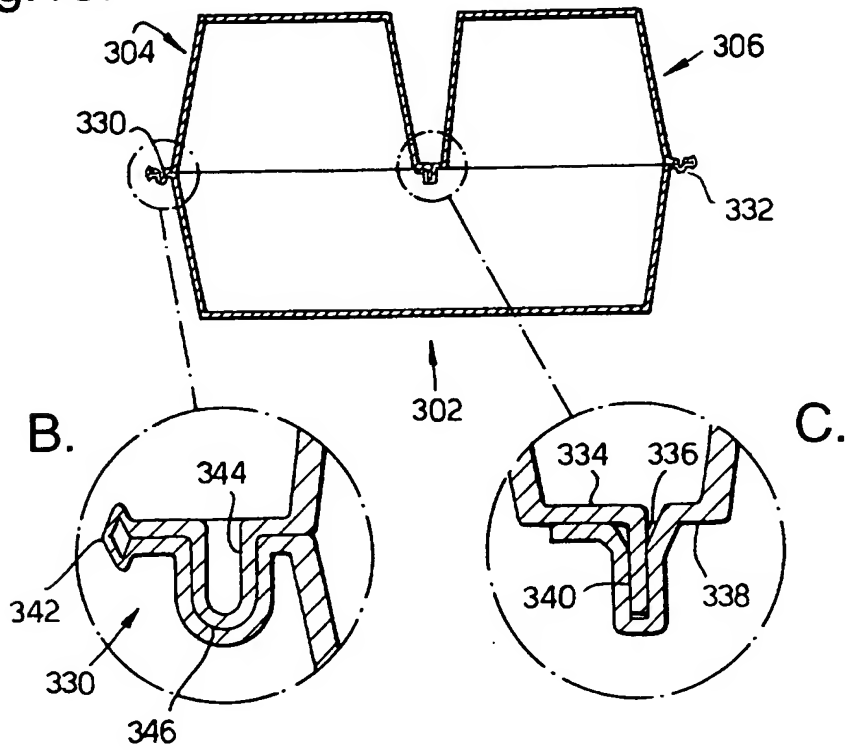


Fig.13.



METHOD OF COOKING AND FOOD PACKAGES
CONTAINING FOOD TO BE COOKED THEREIN

This invention relates to a food package and more
5 particularly to a food package for providing a food product
including a sauce component. The invention is especially,
though not exclusively, applicable to packaging for
providing products that may be cooked in a microwave oven.

10 In recent years there has been an increased demand
from consumers for pre-prepared food products, including
for example both meat and vegetables in a sauce, that can
be quickly and easily cooked or heated ready to eat. There
has been a particular demand for products that can be
15 cooked or heated in microwave ovens in order that consumers
may take advantage of the speed of this form of cooking.

These pre-prepared food products, typically referred
to as "convenience foods", are generally provided in a pre-
20 cooked state and are then re-heated by the consumer, using
for instance a conventional oven or a microwave oven, prior
to their being eaten. Typically, the packaging for these
convenience foods comprises a thermo-formed plastics
container sealed by a heat sealable film applied across the
25 container opening.

To heat the product the consumer pierces the heat seal
film and places the complete container in for example a

microwave oven to be heated for a specified length of time. The heat seal film is then removed completely and the product may be served onto a separate dish or eaten directly from the container. In this way the consumer can
5 quickly and easily prepare a meal.

Despite the advantages offered by known convenience foods, many consumers do not favour the products currently available. Pre-cooked and subsequently re-heated foods are
10 often perceived as lacking flavour and texture when compared with the same food that has been freshly cooked. Therefore, it is desirable to provide convenience foods that are pre-prepared but not pre-cooked, and are instead cooked by the consumer just prior to their being eaten.

15

However, for food products including a sauce it is extremely desirable that the sauce be kept separate from the raw food until the raw food is to be cooked; otherwise the sauce may act as a growth medium for any small amount
20 of bacteria which may be present in the raw food.

One possible form of packaging that could be used to overcome this problem includes a main container for holding the raw food and a separate sachet for holding the sauce.
25 Such packaging is already used for a variety of food products. However, in order to cook the food it would be necessary for the consumer to open the main container, open the sachet, pour the sauce contained in it over the raw

food, place a lid over the container and finally cook and serve the product. Obviously, this process is not as convenient as the conventional process described above for re-heating convenience foods and is likely to be perceived
5 by the consumer as comprising an undesirably large number of steps.

The present invention enables the provision of a food package that can be used safely to contain a pre-prepared
10 food product including raw food and a sauce, and is convenient for a consumer to use.

According to a first aspect the invention provides a method of cooking food which comprises the steps of

- 15 (1) providing a package comprising
a first container having a closed end and an open end,
a second container having a closed end and an open end,
20 the first and second containers being capable of assuming at least a first, storage, position relative to one another in which respective interiors of the containers are each releasably sealable from the atmosphere, and which containers are additionally capable of assuming a closure
25 position which is at least one of the first position and a second position relative to one another, in which closure position (a) the second container overlies and is supported by the first container, (b) the closed end of the second

container is disposed remote from the closed end of the first container and (c) the open end of the second container faces the closed end of the first container, whereby the second container partly or wholly covers the
5 open end of the first container,

each of the first and second containers containing a food component,

the package including means for releasably sealing from the atmosphere each food component when the containers
10 are in the said first, storage, position relative to one another,

the package being provided with the containers arranged in the said first, storage, position relative to one another in which the interior of each container is
15 releasably sealed from the atmosphere outside the package;

(2) removing the sealing means from the first and second containers;

(3) arranging the containers in the said closure position in which the second container overlies and is
20 supported by the first container, if they are not already so arranged, so as to allow emptying of the food component in the second container into the first container; and, when the containers are in the closure position,

(4) subjecting the food components to a cooking
25 operation by applying to the package heat or microwave radiation.

A preferred method of cooking food includes the steps

of

(1) providing a package comprising

a first container having a closed end and an open end,

5 a second container having a closed end and an open end and releasably held in a first, storage position in which the closed end of the second container is disposed within the first container and the open end of the second container lies remote from the closed end of the first
10 container,

at least one of the first and second containers having a laterally extending flange, which said flange on one said container is capable of providing a support for the other container, whereby the closed end of the second
15 container, disposed within the first container, is spaced from the closed end of the first container so as to define a first food compartment for a first food component and the open end of the second container allows dosage of a second food component into the second container thereby providing
20 a second food compartment and

means for releasably holding the second container in the said first position,

the said second container, after release thereof by the said holding means, being capable of assuming a
25 second, closure position in which the closed end of the second container is disposed remote from the closed end of the first container and the open end of the second container faces the closed end of the first container

whereby the second container serves as a closure member for the first container, the said flange on one said container being capable additionally of providing a support for the other container when the second container is in the said
5 second position,

each of the first and second food compartments containing respective first and second food components;

the package including means for releasably sealing each said food compartment containing a respective
10 food component from the atmosphere when the second container is disposed within the first container; and

the package being provided with the second container in the first, storage position within the first container;

15 (2) removing the sealing and holding means from the first and second containers, releasing the second container from within the first container and inverting it so as to allow emptying of the contents of the second container into the first container to form a mixture of the first and
20 second food components and location of the second container in its closure position over the first container; and thereafter

(3) subjecting the mixture to a cooking operation by applying to the package heat or microwave radiation.

25

Preferably, the second food component in the second container comprises a thickened sauce material adhering to the internal surface of the second container, whereby the

second container is emptied as a result of the sauce melting during the cooking procedure so that it then flows into the first container beneath it so as to mix and cook with the foodstuff in the first container.

5

Such a package and method of cooking the food components is especially useful and yields the following advantages, especially when the first food component in the first container comprises raw vegetables.

10

Initially, before and during the initial period of the cooking operation, the second container is laden with sauce and is relatively heavy and therefore provides a secured fit and seal with the second container. During this
15 initial period of cooking the first food component, such as raw vegetable material, can cook within its own residual moisture. Indeed visual observation of the package during this initial period may suggest that no cooking takes place. However, just at the time when the first food
20 component needs moisture, to prevent its dehydration, the second food component (sauce material) becomes liquid and flows from the internal surface of the second container into the first container where it mixes with the first food component and cooks with it in a second period of the
25 cooking operation. Finally, once all the sauce material has left the second container this becomes lighter and the now increased pressure within the package may cause slight lifting of the second container to allow escape of steam.

In some embodiments, dimples may be provided in the internal periphery of the second container so as (1) to provide a better "key" between the solidified sauce material and the second container until the sauce material becomes liquid on heating and (2) to increase the weight of sauce material which may be held by the second container when in its inverted position.

According to another aspect, the invention provides a package comprising at least:

a first container having a closed end and an open end,
a second container having a closed end and an open end,

the first and second containers being capable of assuming at least a first position relative to one another in which respective interiors of the containers are each releasably sealable from the atmosphere, and which containers are additionally capable of assuming a closure position which is at least one of the first position and a second position, relative to one another, in which closure position: (a) the second container overlies and is supported by the first container, (b) the closed end of the second container is disposed remote from the closed end of the first container and (c) the open end of the second container faces the closed end of the first container, whereby the second container partly or wholly covers the open end of the first container,

the first container containing a first food component

and the second container containing a second food component,

the package including means for releasably sealing from the atmosphere each said food component when the
5 containers are in the said first position,

the second food component being rendered substantially solid and adhered to the internal surface of the second container.

10 Preferably, when the containers assume the said position relative to one another in which the second container overlies and is supported by the first container, the second container is independently, or in combination with at least one additional closure element, capable of
15 substantially closing the open end of the first container, whereby the second container, or the combination of the second container and the or each additional closure element if applicable, serves as a lid or lid component for the first container.

20

In embodiments of the package of the present invention which include the one or more additional closure elements, the or each closure element is preferably an additional container capable of assuming a position relative to the
25 first container in which it overlies and is supported by the first container in the same way as the second container is so supported, in which position the additional container(s), in combination with the second container,

serve(s) as a lid for the first container. The or each additional container may contain a or a respective food component, which food component may be the same as or different to the second food component.

5

In the package as supplied, the second container may lie in a first position which is a closure position in which the second container overlies and is supported by the first container, with the closed end of the second
10 container disposed remote from the closed end of the first container and the respective open ends of the first and second containers in juxtaposition. The first container may contain a first food component such as raw vegetables and the second container a second food component such as a
15 sauce adhered to the closed end of the second container, so that when the package is disposed so that the first container lies below the second and subjected to heating for cooking the second food component is free to melt and mix with the first food component in the first container.
20 The package as supplied is fitted with at least one sealing means for releasably sealing from the atmosphere each said food component. The sealing means may also serve additionally to secure the containers together. The sealing means may be removed either prior to or
25 subsequently to cooking.

However, in a preferred package,

the second container is releasably held in the first,

storage position in which the closed end of the second container is disposed within the first container and the open end of the second container lies remote from the closed end of the first container,

5 at least one of the first and second containers has a laterally extending flange, which said flange on one said container is capable of providing a support for the other container, whereby the closed end of the second container, disposed within the first container, is spaced from the
10 closed end of the first container so as to define a first food compartment containing the first food component and the second container defines a second food compartment containing the second food component and

means are provided for releasably holding the second
15 container in the said first, storage position,

the said second container, after release thereof by the said holding means, being capable of assuming the second, closure position in which the closed end of the second container is disposed remote from the closed end of
20 the first container and the open end of the second container faces the closed end of the first container whereby the second container serves as a closure member for the first container, the said flange on one said container being capable additionally of providing a support for the
25 other container when the second container is in the said second, closure position.

Preferably, the package additionally comprises means

for releasably sealing each food compartment from the atmosphere.

In some practical embodiments of the invention the
5 flange protrudes inwardly from the internal periphery of
the first container and is spaced from its closed end. In
such embodiments the second container is constructed such
that when it is disposed within the first container its
closed end abuts and is supported by the flange and is
10 thereby held spaced from the closed end of the first
container. Additionally, the second container may be
constructed such that when it assumes the said second
position its open end abuts the flange and is thus
supported by it.

15

In other, more preferred, practical embodiments of the
invention each container has a laterally extending flange
at or adjacent its open end, the flanges of respective
containers being adapted to cooperate with one another to
20 support the second container in each of the two said
positions. For instance, a first flange may extend
inwardly from the perimeter of the open end of the first
container and a second flange may extend outwardly from the
perimeter of the open end of the second container, the
25 flanges being arranged to be capable of abutting one
another when the second container assumes either of the
said positions. Alternatively, and even more preferably,
both flanges extend outwardly from respective open ends of

the containers so as to present the least obstruction to the passage of food components into and out of the containers.

5 In particularly preferred embodiments of the invention the or each flange is profiled so as positively to locate the second container when it is supported in either of the said positions. For instance, in embodiments of the invention in which each container has a flange, one of the
10 flanges may include one or more recessed portion(s) and the other flange may include one or more corresponding protruding portion(s) engageable within the recessed portion(s). Most preferably, at least one flange includes a vertical step or lip extending around its outer edge so
15 as to define a recess in which the other flange may be seated.

The means for releasably sealing the or each compartment containing a food component may take any form
20 and may for example be a metal foil, a heat sealable film or a screw on or a clip on cap. Preferably both of the compartments are sealed from the atmosphere by a common heat sealable film that covers the open ends of both containers and is adhered at least to the first container
25 at or adjacent its open end. Most preferably the heat sealable film is also adhered to the second container at or adjacent its open end to ensure that the food components remain separated from one another, irrespective of the

orientation of the package, until such time as the consumer mixes them or enables them to be mixed. In this way the heat sealable film also provides the means by which the second container is releasably held with its closed end
5 disposed within the first container. Ideally, the heat sealable film may be sealed to an outer flange portion of the flange of the first container and so extend over the open end of both the first container and the second container within the first container. A further seal may
10 be provided with an upper surface portion of the flange of the second container.

Alternatively, but less preferably, the means for releasably holding the second container may comprise for
15 example cooperating screw threads on the two containers or one or more retaining elements on either or both of the containers.

In an especially preferred embodiment, each of the
20 first and second containers has a laterally extending flange at or adjacent its open end, the flange of the first container being profiled so as to provide a laterally inner step portion of the flange capable of receiving a laterally outermost step portion of the flange of the second
25 container and the depth of the step portion of the profiled flange of the first container is greater than, preferably at least twice as great as, the thickness of the material of the flange of the second container; and

the flange of the second container having a laterally outermost step portion cooperable with the step portion of the flange of the first container to locate and support the second container in position within the first container or, 5 when the second container serves as a closure member for the first container, cooperable to locate and support the second container in this closure position.

Thus, according to another aspect of the invention 10 there is provided a package comprising

a first, outer container having a closed end and an open end,

a second, inner container having a closed end and an open end and releasably held in a first, storage position 15 in which the closed end of the second, inner container is disposed within the first, outer container and the open end of the second, inner container lies remote from the closed end of the first, outer container,

each of the first and second containers having, at or 20 adjacent to its open end, a laterally extending flange, which said flange on one said container is capable of providing a support for the other container, whereby the closed end of the second, inner container, disposed within the first, outer container, is spaced from the closed end 25 of the first, outer container so as to define a first food compartment for a first food component and the open end of the second, inner container allows dosage of a second food component into the second, inner container thereby

providing a second food compartment and

means for releasably holding the second container in the said first position,

the said second, inner container, after release
5 thereof by the said holding means, being capable of assuming a second, closure position in which the closed end of the second, inner container is disposed remote from the closed end of the first, outer container and the open end of the second, inner container faces the closed end of the
10 first, outer container whereby the second, inner container serves as a closure member for the first, outer container, the said flange on one said container being capable additionally of providing a support for the other container when the second container is in the said second, closure
15 position,

the flange of the first, outer container being profiled so as to provide a laterally inner step portion of the flange capable of receiving a laterally outermost step portion of the flange of the second, inner container and
20 the depth of the step portion of the profiled flange of the first, outer container being greater than, preferably at least twice as great as, the thickness of the material of the flange of the second, inner container; and

the flange of the second, inner container having a
25 laterally outermost step portion cooperable with the step portion of the flange of the first, outer container to locate and support the second, inner container in its first, storage position within the first, outer container

or, when the second, inner container is in its second, closure position, so as to serve as a closure member for the first, outer container, cooperable to locate and support the second, inner container in its second closure
5 position. Preferably, the flanges of the first and second containers are profiled so as to provide, respectively, a laterally outer portion of the flange of the first container and a laterally inner portion of the flange of the second container capable of contact with releasable
10 sealing means capable of sealing each of the first and second containers when the second container is disposed within the first container.

Since the stepped portion of the flange of the first
15 container has a depth considerably greater than that of the material of the flange of the second container, accidental dislodging of the second container from either of its storage position within the first container or its closure position over the first container is prevented.

20

Preferably the profile of the flange of the second container is such that, when the second container is disposed with its open end facing upwardly, as when disposed within the first container, the laterally
25 outermost step portion depends downwardly from a laterally inner portion at the open end of the container. When the second container is inverted and assumes its closure position over the second container, the stepped portion and

laterally inner portion extend into the open end of the first container, so that the contents of the second container may fall into the first container without possible leakage occurring between the flanges and thereby
5 outside the containers.

In one especially preferred embodiment, a pair of opposed lugs are provided on both of the first, outer container and second, inner container to allow the user to
10 more easily hold the package, for example, when inverting the second container so as to provide a closure member for the first container.

In addition, the lugs carried by respective first and
15 second containers may be profiled so as to cooperate with one another so as to locate the second container in a predetermined position within the first container. For example, the lugs of the first container may be recessed, so that the lugs in the second container can sit in the
20 recess. The containers are thereby fixed in position relative to one another both when the second container assumes its first storage position within the first container and when the second container assumes its second closure position as a lid for the first container.

25

The provision of such lugs is especially useful when, as is preferred, the package is of circular section.

A further embodiment of the present invention provides a package in which, in the said first position, the first and second containers lie adjacent to one another and the open ends of the two containers face in generally the same
5 direction,

the first and second containers being connected to one another by a connecting flange defining an edge portion common to the respective containers at open ends thereof,

the flange being foldable such that the second
10 container can be inverted so as to assume a second position relative to the first container, in which second position the second container overlies and is supported by the first container.

15 Preferably, the open end of the second container corresponds in both size and shape to the open end of the first container and the containers are orientated with respect to one another such that when the second container is flipped over, by folding the said flange, into the said
20 second position it substantially covers the whole of the open end of the first container, thereby serving as a lid for the first container.

Alternatively, one or more further containers, in
25 addition to the first and second containers, may be provided, the or each of the second and other containers being connected to the first container by a foldable flange connection, each flange being common to the first and one

of the or each other respective containers, more preferably in the same way that the second container is connected to the first container. In such embodiments, the size and shape of the open end, and the orientation and position
5 relative to the first container, of each of the second container and the or each further container, are selected such that in combination these containers are capable of serving as respective lid components together providing a lid for the first container when they are all flipped over
10 into a position in which they overlies and are supported by the first container.

The connection between the first container and the second container and the connection(s) between the first
15 container and any further container(s) included in the package preferably take the form of a hinge-type connection, which for instance may be formed by connecting the containers with one or more flanges of a suitably flexible structure and/or material. Most preferably the or
20 each hinged flange includes retention means for securing the second and the or each other container (if provided) in its closure position. Additionally, or alternatively, separate retention means may be provided for this purpose.

25 For example, the or each hinged flange may carry at least first and second engageable elements disposed one to each side of the hinge, one of which elements is capable of engaging and releasably retaining the other when the

respective containers are arranged in their closure positions, thereby securing the said container in that position. Additionally or alternatively at least one pair of the free edge portions of the first container and/or the
5 second container and/or any further container may be provided with one or more clip elements for securing the second container and/or the said any further container in its/their respective closure positions in which respective edges of the containers cooperate with one another to
10 effect closure.

Preferably, in the said first position the open ends of the first and second containers, and that of any additional container, lie in substantially the same plane
15 as one another and each open end has a flange around its perimeter to which releasable sealing means, for example a metal foil or more preferably a heat sealable film, may be attached, such that the sealing means cover the open end of the container, whereby the interior of the container is
20 releaseably sealed from the atmosphere. Most preferably all of the containers of the package are sealed by a common heat sealable film.

The first container may be any shape and/or size,
25 although the shape will typically be selected for ease of storage and the size may generally be selected in relation to the volume of the food components that it is intended to hold. The second and any further container(s) may also be

of any shape and/or size, although preferably the shape and dimensions of the open end of the or each container is selected as described above in order that the second container, or the combination of the second container and
5 any further container(s) together, can serve as a lid for the first container. Also preferred, for ease of packing and storage, is that the second container and any further container(s) are of the same depth as the first container.

10 In dependence upon the nature of the second food component to be present in the second container, especially its moisture content, when the package is to be inserted in a microwave oven, it may be preferable to provide the second container with a microwave shield to prevent the
15 second food component from drying out during cooking of the second component. This may, for example, be a film of metal (e.g. aluminium) foil or a metallised plastics material, e.g. a metal foil/plastics film laminate, which may cover at least a part of the outer or inner surface of
20 the second container.

The first and second containers may be of any shape and size and may be of the same material and/or structure or of materials and/or structures different from each
25 other. Preferably, the first and second containers are of the same material as each other and for instance may each be formed in a conventional manner from a plastics material. Most preferably, the first and second containers

are formed from a material, such as a high melting point plastics material, suitable for use in both microwave and conventional ovens, for example, polyethylene terephthalate (PET). It is particularly attractive to the consumer to have a package which is either ovenable or microwavable at will. If an ovenable package is not required, the container may, for example, be made from polystyrene, polyvinyl chloride or polypropylene.

10 Preferably, in the package as supplied to a user, at least one of the first and second food compartments contains a food component and the package additionally comprises means for releasably sealing the or each said food compartment containing a food from the atmosphere.

15

Thus, in a package according to any aspect of the invention raw food can be provided in one of the first and second food compartments and a sauce can be provided in the other in a manner such that they are separated from one another. To cook the food the second container is released from the first container and the sauce and raw food may be combined in one or other of the containers and then placed in for example a microwave oven for a specified length of time. Preferably, the food components are combined in the first container and the second container is used as a lid for it. Alternatively, the food components may be combined in a separate cooking vessel.

A package according to the invention may be used as a "cooking-out" vessel, that is to say as a package for ingredients that are mixed and cooked in a separate cooking vessel. For instance, one of the containers may hold raw
5 vegetables and/or proteinaceous material such as meat or fish and the other container may contain a thickened soup stock. The consumer could then empty the contents of both containers into a saucepan of boiling water to produce a hot vegetable soup. The contents may for example be
10 packaged in an amount suitable for pouring into 1 litre of water.

However, preferred embodiments of the package of the invention are particularly suited for use as a "cooking-in"
15 vessel. In other words the separate ingredients are mixed and cooked in one of the two containers, thus eliminating the need for a separate cooking vessel. Typically, the sauce will be provided in the second container and then poured over the raw food in the first container just prior
20 to cooking.

Whichever form of package is employed it may be used by the consumer as follows. The means for sealing the first and second containers is removed, the second
25 container is removed from out of the first container and the contents of both containers brought together. At least one indentation or protruding member may be formed on the second container to aid its removal from the first

container and, likewise, when the second container is to be inverted and used as a lid for the second container, means, especially a handle, for gripping the second container may be provided to facilitate its placement as a lid on the
5 first container and its subsequent removal after cooking.

When the package is to serve as a cooking vessel with the second container in its second position and serving as a lid for the first container, at least one vent and
10 preferably several vents may be provided in at least one of the first and second containers to allow escape of steam.

The reference herein to "cooking" includes heating of any foodstuff prior to consumption, whether raised to
15 boiling or not and whether the food in any of the containers is entirely raw or partially or fully precooked.

However, a particularly preferred package in accordance with the invention contains raw food, especially
20 vegetables, in the first container and a solidified material in the second container which solidified material is preferably a sauce material and/or a proteinaceous material, more preferably a sauce containing proteinaceous material such as fish, poultry or red meat, and which
25 solidified material is preferably set by means of a setting agent such as gelatin so that it adheres to the inner surface of the second container, and remains therein on inversion of the second container, as, for example, when

it assumes a position in which it provides a closure lid for the first container. The solidified sauce is capable, on heating the package during cooking, of dropping or flowing out of the second container directly into the first container containing the raw material in the first container, also being cooked.

Preferred embodiments of the invention will now be described in detail, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 is a sectioned side elevational view of a package according to a first embodiment of the invention as supplied to the consumer;

15

Figure 2 is a sectioned side elevational view of the package of Figure 1, as arranged for cooking.

Figure 3 shows a package according to a second embodiment of the invention in which each container is provided with a pair of opposed cooperating lugs;

Figure 4 shows a part of a package according to a third embodiment of the invention in which the second container assumes a first, storage position within the first container and in which each of the first and second containers has a respective profiled flange having a stepped portion providing improved location of the second.

container within the first;

Figure 5 shows a part of the package according to Fig. 4, but wherein the second container assumes a second, 5 closure position over the first container;

Figure 6 is a perspective view of a package according to a fourth embodiment of the invention, in which the containers are shown in a first, storage position and in 10 which the second container is attached to the first container by a foldable flange connection;

Figure 7 is a perspective view of the package of Figure 6, in which the containers are shown in a second, 15 closure position;

Figure 8 is a perspective view of a package according to a fifth embodiment of the invention, in which the containers are shown in a first, storage position; 20

Figure 9 is a perspective view of the package of Figure 8, in which the containers are shown in a second, closure position;

25 Figure 10 is a perspective view of a package according to a sixth embodiment of the invention, in which the

containers are shown in a first, storage position;

Figure 11 is a perspective view of the package of
Figure 10, in which the containers are shown in a second,
5 closure position;

Figure 12 is a cross-sectional view of a package
according to a seventh embodiment of the invention, in
which the containers are shown in a first, storage
10 position; and

Figure 13 is a cross-sectional view of the package of
Figure 12, in which the containers are shown in a second,
closure position.

15

Referring firstly to Figure 1, a food package 2
comprises a first container 4 and a second container 6
carried within the first container 4. Both the first and
second containers 4,6 have an opening at their top end and
20 a closed bottom end 44,64. The top ends of the containers
lie in substantially the same plane as one another and the
openings are sealed by a common heat sealable film 8, of
for example, polyethylene terephthalate (PET), a polyamide,
for example, a nylon, or a polyolefin such as polyethylene
25 or polypropylene, which is sealed against at least flange

42 of the first container 4 and preferably also against flange 62 of the second container 6. The heat sealable film additionally holds the second container in the position shown in Figure 1. The two containers 4,6 are
5 formed from a plastics material suitable for use in both microwave and conventional ovens, for example, PET.

A first flange 42 protrudes laterally outwardly from the perimeter of the opening of the first container 4 and
10 cooperates with a second flange 62 protruding laterally outwardly from the perimeter of the opening of the second container 6, whereby the second container 6 is suspended within the first container 4. The first flange 42 includes a step 43, a vertical face 45 of which defines a recess 46
15 in which the second flange 62 may be positively located.

The closed end 64 of the second container 6 is spaced from the closed end 44 of the first container 4 to define a first food compartment 9, and the interior of the second
20 container 6 provides a second food compartment 11.

The first food compartment 9 may hold raw food 10, such as vegetables, soya, meat, fruit etc., or a combination of such foodstuffs. The second food compartment 11 may hold a sauce 12, in which the raw food 10 is intended to be cooked.

To prepare the package 2 for cooking, the consumer removes the heat sealable film 8, for instance by a peeling action, thus releasing the second container 6.

10 Conveniently, the heat sealable film 8 may be provided with a pull tab (not shown) to ease its removal, as is well known in the packaging art. The consumer then inverts the second container 6 (see Figure 2) and replaces it on top of the first container 4. In this inverted position, the

15 flanges 42, 62 cooperate to support the second container 6, which now acts as a lid for the first container 4. In a manner similar to that when the container 6 is in the first position (as in Fig 1), the second flange 62 may be positively located in the recess 46.

20

The sauce 12 is then free to run from the second container 6 into the raw food 10 in the first container 4 as indicated by the arrows 14. The package can then be placed in a microwave or a conventional oven for a

25 predetermined length of time to cook the raw food 10 in the sauce 12.

Packages according to the invention may be provided to

the consumer in a frozen state, in which case the sauce 12 may run into the raw food 10 during rather than prior to the cooking thereof.

5 Reference is now made to Fig. 3, which shows a package 100 comprising a first, outer container 102 in which sits a second, inner container 104. The outer container has a peripheral flange 106 surrounding its open end, which flange 106 is stepped so as to provide a recess, in which
10 sits a corresponding peripheral flange 108 surrounding the open end of the inner container 104.

Each of the respective flanges 106, 108 of the inner and outer containers 102, 104 has a pair of diametrically
15 opposed lugs. Lugs 110 on the flange 106 of the outer container are each profiled so as to provide a recess in which sits a respective lug 112 on the flange 108 of the inner container. In this manner, the profiled outer lugs 110 on the flange 106 of the outer container 102 serve to
20 hold in position the lugs 112 on the flange 108 of the inner container 104, so locating the inner container 104 in a predetermined position within the outer container 102 during assembly and storage. Likewise, on inverting the inner container so that it serves as a closure member for
25 the outer container, the cooperating pairs of lugs 110, 112 again serve to locate the second, inner container, in position as a lid on the outer container. In addition to this, the lugs on both containers, and especially the outer

container, facilitate handling of the package both prior to cooking, for example, when inverting the inner container, and handling of what may be a hot package subsequently to cooking, especially removing the second container away from
5 the first to allow the food to be served.

As will be seen from the drawing, a location gap 114 may also be provided for ease of insertion of the inner container into the outer container during packaging and for
10 its ease of removal for use as a closure member. This may also facilitate escape of hot air or steam.

In this package, the inner container may contain sauce and/or protein, especially sauce and protein in combination
15 and this sauce or its mixture with protein may be rendered rigid using a setting agent such as gelatin. Vegetables can be held in the outer container.

The whole assembly may be completed by providing a
20 sealing film adhered to the free upper surface of the flange 106 of the outer container 102. The sealing film thus seals the food in both containers from the atmosphere and also serves to hold the inner container in position within the outer container in the event that the package
25 should be inverted.

Reference is now made to Figs. 4 and 5, which show a package of circular section. However, the package may be of

any suitable shape.

The first, outer container 200 has at an open axial end thereof a radially outwardly projecting flange 202 profiled so as to provide a stepped portion 204 and a rim portion 206 radially outwardly of the stepped portion 204 and surrounding the axial open end of the first container 200.

10 A second inner container 210 has, at its open axial end, a radially outwardly projecting flange 212 profiled so as to provide a rim portion 214 surrounding the open, axial end of the second container and, depending therefrom, a stepped portion 216 disposed radially outwardly of the rim
15 portion 214.

As shown in Fig. 4, the stepped portion 204 of the flange 202 of the first container 200 carries a base of the stepped portion 216 of the flange 212 of the second
20 container 210 so as to support the second container 210 in position within the first container 200.

A film 220 extends over the open axial end of each of containers 200 and 210 and is removably sealed to each of
25 the first and second containers at respective surfaces provided by rim portions 206 and 214 of the first and second containers so as to seal both containers, each of which contains a respective food component.

Especially if the food component in the second, closure container has a low moisture content and it is intended that the package be cooked in a microwave, at least part of, and preferably the entire, inner or outer surface of the second container may be covered with a metal foil or metal/plastics laminate film so as to provide a shield from microwave radiation, thus preventing the second food component in the second container from drying out during the initial stages of cooking the first food component in the first container. The second food component then merely becomes heated or cooked by reflected radiation and by the heat generated by cooking the first food component. It is found that, typically the second food component will then remain in the upturned second, closure container for about 40 seconds after which it will drop into and cover the first food component and be cooked with it for the desired length of time.

When it is desired to cook the food components in the containers, film 220 is removed, the first container is removed from the first, storage position shown in Fig. 4 and inverted so that it assumes the second, closure position shown in Fig. 5. In this position, a base of the stepped portion 204 of the profiled flange 202 of the first container 200 carries a base of the stepped portion 216 of the profiled flange 212 of the second container 210, this time in the inverted position of the stepped portion 216, so as to locate and support the second container 216 in its

second closure position.

It can be seen that this particular construction allows a particularly secure arrangement of the second
5 container in relation to the second container when both in the first, storage, position and second, closure position.

Moreover, when the second container contains a food component which is liquid or when, as is preferred, it
10 becomes liquid after commencement of cooking, any liquid running down the second container can run right down to its axial open end surrounded by rim 214, so preventing its leakage between the respective stepped portions 204 and 216 of the first and second containers 200 and 210
15 respectively, thereby preventing egress of the liquid from the package to the outside.

As to the dimensions of the respective stepped portions 204, 216 of the respective profiled flanges 202,
20 212 of respective first and second containers 200, 210, it is preferable that (referring to Fig. 4) the depth 'a' of stepped portion 216 is equal to that 'b' of stepped portion 204. This provides both for a good even sealing surface when the second container is in its first, storage position
25 and a good seating position when in its second, closure position.

In addition, the depth 'b' should be at least twice

the thickness 't' of the base of the stepped portion 216 and preferably the depth 'b' is at least 1-2 mm, more preferably at least 4 -5 mm, especially at least 1 cm.

5 It is also preferred to provide the internal surface of the second container with dimples defining respective recesses in the surface or, more preferably, a single recess within the internal surface so that the container may hold more of the second food component. Such a single
10 recess, especially when fairly deep, for example at least 1 cm, may also minimise splashing during dosage of foodstuff into the container, thus preventing fouling of the sealing areas. Such splashing is also minimised by incorporation into the second food component of a setting agent, the
15 presence of which also facilitates dosage of the food component in a controlled manner; in particular, it breaks the fall of proteinaceous material during dosage. Such a setting agent, for example as gelatin, may be introduced into a flow line of the second component as a sub-volume of
20 the second food component on its way to a dosage station (see below).

In order to assemble the package, the following continuous procedure may be adopted.

25

The first outer container 200 is placed with its open end facing upwardly and conveyed to a first station where a first food component is introduced into it. The first

container 200 containing the first food component is then conveyed to a second station where the second container 210 is placed within the first container with its open end facing upwardly. The containers 200, 210 are then conveyed
5 to a third, dosage station where the second food component is dosed into the second container and then to a fourth station where a film is placed over the top of the containers and heat sealed against each container at regions 206, 214 (see Fig. 4).

10

In use, for example, when subjecting the food components to microwave cooking or heating, the heat sealed film 220 is removed, container 210 is inverted so that it assumes its closure position and the package is inserted in
15 the microwave. Especially where the second container includes a shield protecting the second food component from direct microwave cooking, then in a first stage of cooking, the first food component, for example, raw vegetables is subjected to microwave cooking without contact or covering
20 of the first with the second food component. This allows for better cooking of the first component in the absence of such a covering. Moreover the mass of the second food component in the second container serving as a closure member provides an increased weight improving stability of
25 the package and the generation of a greater steam pressure without displacement of the closure member. Thus, the cooking in this first stage generates steam, which together with any indirect microwaves heats the second food

component until the setting agent melts and allows the second food component to drop (often as a whole mass) onto the first food component. Typically this may take about 40 - 45 seconds. Continued cooking then increases the steam pressure further until the closure member 210 is lifted from its seat provided by the base of stepped portion 204 in the flange 202 of the first container 200, thus temporarily reducing the pressure. Especially where a deep stepped portion 204 is provided this allows the closure member to bob up and down, controllably releasing the pressure. If the pressure is likely to become too great for a particular combination of foodstuffs, small apertures of predetermined size and number may be provided in the second container by the manufacturer of the package to adjust the pressure to a desired value such as to provide efficient cooking which will allow the closure member to remain in position over the first container. Thus, the manufacturer may decide whether or not, and if so how, to puncture, to provide any steam vent which may be desirable. This is considerably more convenient and efficient than requiring the purchaser uncontrollably to pierce the closure member.

In a typical cooking operation, which may last from 4 to 10 minutes, typically often 6 - 7 minutes, substantially more steam may be retained by the provision of a 1 cm deep stepped portion.

A package in accordance with the invention thus allows control not only of how long (to some extent) the first component may be cooked before it mixes with the second component but also provides a steam pressure environment
5 with which both food components may cook without a pressure explosion. This allows for maximum retention of moisture and aromatics.

Referring now to the package shown in Figures 6 and 7
10 this includes a first container 302 of square section and second and third containers 304,306 of rectangular section. The rectangular section of each of the first and second containers 304,306 corresponds in size and shape to half of the square section of the first container 302, such that in
15 combination the second and third containers 304,306 are capable of serving as a lid for the first container 302. All three containers 302,304,306 are of equal depth.

Each of the containers 302,304,306 has an open end
20 302a,304a,306a and a closed end 302b,304b,306b. A longitudinal edge 308 of the second container 304, which edge 308 is at the second container's open end 304a, is connected to a first edge 309 of the first container 302, which first edge 309 is at the first container's open end
25 302a, via a foldable flange 310 providing a hinge like connection, which flange is disposed between the said edge 308 of the second container 304 and the said first edge 309 of the first container 302 and extends along the full

length of the edges 308,309.

Similarly, a longitudinal edge 311 of the third container 306, which edge 311 is at the third container's open end 306a, is connected to a second edge 312 of the first container 302, which second edge 312 is at the first container's open end 302a and is opposite the first edge 309 of the first container 302, via a second foldable flange 313 which is disposed between the two edges 311,312 that it connects and extends along the full length of those edges 311,312.

In a storage position (shown in Figure 6) the second container 304 lies adjacent a first side of the first container 302 and the third container 306 lies adjacent a second side, opposite the first side, of the first container 302. In this storage position, the open ends 302a,304a,306a, of the containers 302,304,306, are all contained in the same plane, such that a unitary heat sealable film (not shown) may readily cover the open ends 302a,304a,306a of the containers 302,304,306, whereby, upon sealing of the film to a flange 316 that extends around the periphery of the containers, the interiors of the containers 302,304,306 are sealed from the atmosphere. Preferably, the heat sealable film is also sealed to both of the foldable flanges 310,313 whereby the interiors of the containers 302,304,306 are also sealed from one another.

When supplied to a consumer the first, second and third containers 302,304,306 contain respective first, second and third food components. Typically, the first container 302 contains raw vegetables and the second and third containers 304,306 each contain a solidified sauce adhered to the internal surface of the container and containing proteinaceous material, which sauce and proteinaceous material mixture in one of the second and third containers 304,306 may be the same as or different from that contained in the other one of the second and third containers 304,306.

In use, to subject the food components to microwave cooking or other heating, the heat sealed film is removed, the second and third containers 304,306 are flipped over into a closure position in which they both overlie the first container 302, thereby serving in combination as a lid for the first container (see Figure 7).

Following this, the package is placed in, for example, a microwave oven or a conventional oven and subjected to microwave radiation or heat for a predetermined length of time.

Figures 8 and 9 show a second package and Figures 10 and 11 show a third package, both of which packages are of similar construction to the package of Figures 7 and 8. However, each of the second and third packages includes

only first and second containers 302',304' which, in order that the second container 304' can on its own serve as a lid for the first container 302', are of equal size and shape. Each container has an open end 302'a,304'a and a
5 closed end 302'b,304'b.

The packages of Figures 8/9 and 10/11 differ only in their shape, each of the containers 302',304' of the package of Figures 8 and 9 being of semi-circular section,
10 and those of the package of Figures 10 and 11 being of triangular section. Any other shape may of course be used.

In each of these two packages, the containers 302',304' are connected to one another via a foldable
15 flange 310', providing a hinge like connection which links the straight edge 320 at the open end 302'a of the first container 302' to the straight edge 322 at the open end 304'a of the second container 304'.

20 As with the package of Figures 6 and 7, each of these packages would typically be supplied to the consumer in a storage position (see Figure 6) in which the two containers 302',304' lie adjacent one another, the first and second containers 302',304' contain respective first and second
25 food components and the interiors of both of the containers are sealed from the atmosphere by a unitary heat sealed film.

To cook the food components, similarly to the package of Figures 6 and 7, the heat sealed film is removed, the second container 304' is inverted such that it overlies and serves as a lid for the first container 302' and the package is heated in, for example, a microwave for a predetermined length of time.

Figures 12 and 13 show a seventh package embodying the invention which is structurally extremely similar to the package of Figures 6 and 7, the major difference being the inclusion of retention means to secure the second and third containers 304,306 in their closure position in which they together serve as a lid for the first container 302.

Each of the second and third containers 304,306 is connected to the first container by a foldable flange 330,332, one of which is shown in an open position in the enlarged detail A of Figure 12 and in a closed position in the enlarged detail B of Figure 13. Both of the foldable flanges are of the same structure and function in the same way.

The flange 330 is foldable by virtue of a suitably flexible hinge section 342 thereof. The flange 330 further includes first and second engageable elements which are, respectively, a raised button 344 and a corresponding depressed dimple 346, disposed one to either side of the hinge section 342. Cooperating profiles other than a

raised button 344 and depressed dimple 346 may be employed, for example, an elongate ridge portion and cooperating chamber. When the second container 304 is flipped over into its closure position, the button 344 engages the
5 dimple 346 and is releasably retained therein by virtue of, for example, an interference fit or a detent arrangement, thereby securing the second container in its closure position. Similarly, the foldable flange 332 is capable of securing the third container 306 in its closure position.

10

Additionally, an edge of the second container 304 at its open end, which edge is opposite the foldable flange 330, has a flange 334 protruding horizontally outwardly therefrom, the flange 334 having a strip 336 protruding
15 vertically upwardly (as viewed in Figure 12) from its outer end. The corresponding edge of the third container 306 also has a flange 338 protruding horizontally outwardly therefrom. This flange 338 however, has a U-section rib defining a downwardly (as viewed in Figure 12) opening slit
20 340 which is capable of receiving and releasably retaining the strip 336 of the flange 334, for example by virtue of an interference fit or a detent arrangement, when the second container is in the closure position. As an alternative to strip 336, the flange 330 may carry a
25 finger, in which case flange 338 may then carry an open socket for receiving the finger.

When both of the second and third containers 304, 306

assume their respective closure positions, the strip 336 of the flange 334 can be engaged and releasably retained in the slit 340 in the U-section rib of the flange 338, as most clearly seen in the enlarged detail C of Figure 13, 5 thereby more securely holding these containers in their closure position and potentially more effectively closing and sealing the first container 302.

CLAIMS

1. A method of cooking food which comprises the steps of
 - (1) providing a package comprising
 - 5 a first container having a closed end and an open end,
 - a second container having a closed end and an open end,
- the first and second containers being capable of
 - 10 assuming at least a first, storage, position relative to one another in which respective interiors of the containers are each releasably sealable from the atmosphere, and which containers are additionally capable of assuming a closure position which is at least one of the first position and a
 - 15 second position relative to one another, in which closure position (a) the second container overlies and is supported by the first container, (b) the closed end of the second container is disposed remote from the closed end of the first container and (c) the open end of the second
 - 20 container faces the closed end of the first container, whereby the second container partly or wholly covers the open end of the first container,
 - each of the first and second containers containing a food component,
 - 25 the package including means for releasably sealing from the atmosphere each food component when the containers are in the said first, storage, position relative to one another,

the package being provided with the containers arranged in the said first, storage, position relative to one another in which the interior of each container is releasably sealed from the atmosphere;

5 (2) removing the sealing means from the first and second containers;

 (3) arranging the containers in the said closure position in which the second container overlies and is supported by the first container, if they are not already
10 so arranged, so as to allow emptying of the food component in the second container into the first container; and, when the containers are in the closure position,

 (4) subjecting the food components to a cooking operation by applying to the package heat or microwave
15 radiation.

2. A method according to claim 1, wherein, when the containers are arranged in the said closure position, the second container, independently, or in combination with at
20 least one additional closure element, substantially closes the open end of the first container, whereby the second container, or the combination of the second container and the or each additional closure element if applicable, serves as a lid or lid component for the first container.

25

3. A method according to claim 1 or claim 2, wherein the second food component in the second container is substantially solid and adherent to the internal surface of

the second container, whereby when the second container is in the said closure position prior to the cooking operation, the sauce material is retained in the second container but, during the cooking procedure, the second
5 container is emptied as a result of the sauce melting during the cooking procedure so that it then flows into the first container beneath the second container so as to mix and cook with the first food component in the first container.

10

4. A method according to any preceding claim, wherein, in the package provided, the first and second containers assume the first storage position and in which method, prior to the cooking operation, the sealing means is
15 removed from the first and second containers and the second container is arranged in a second, closure position overlying the first container.

5. A method according to claim 4, wherein

20

(1) in the package provided

(a) the second container is releasably held in the first, storage position in which the closed end of the second container is disposed within the first container and the open end of the second container
25 lies remote from the closed end of the first container,

(b) at least one of the first and second containers has a laterally extending flange, which

said flange on one said container is capable of providing a support for the other container, whereby the closed end of the second container, disposed within the first container, is spaced from the closed end of the first container so as to define a first food compartment for the first food component and the second container defines a second food compartment containing the second food component and

(c) means are provided for releasably holding the second container in the said first, storage, position, which holding means is optionally separate from or additionally provided by the said sealing means,

(d) the said second container, after release thereof by the said holding means, is capable of assuming the second, closure position in which the closed end of the second container is disposed remote from the closed end of the first container and the open end of the second container faces the closed end of the first container whereby the second container serves as a closure member for the first container, the said flange on one said container being capable additionally of providing a support for the other container when the second container is in the said second, closure position,

(2) prior to arrangement of the second container in the second closure position the sealing and holding means are removed from the first and second containers, thereby

releasing the second container from within the first container

(3) in the step of arranging the second container in the second closure position the second container is
5 inverted so that the second food component adhered thereto is disposed above the first food component in the first container, whereby

(4) in the subsequent cooking operation the sauce flows into the first container and into contact with the
10 first food component to cook therewith.

6. A method according to claim 5, wherein each of the first and second containers has a laterally extending flange at or adjacent its open end,

15 the flange of the first container being profiled so as to provide a laterally inner step portion of the flange capable of receiving a laterally outermost step portion of the flange of the second container and the depth of the step portion of the profiled flange of the first container
20 being greater than the thickness of the material of the flange of the second container; and

the flange of the second container having a laterally outermost step portion cooperable with the step portion of the flange of the first container to locate and support the
25 second container in position within the first container or, when the second container serves as a closure member for the first container, cooperable to locate and support the second container in this closure position.

7. A method according to any one of claims 1 to 4,
wherein, in the package provided, in the first storage
position the first and second containers lie adjacent to
one another and the open ends of the two containers face in
5 generally the same direction,

the first and second containers being connected to one
another by a connecting flange defining an edge portion
common to the respective containers at open ends thereof,

the flange being foldable such that the second
10 container can be inverted so as to assume the second,
closure position relative to the first container, in which
second, closure position the second container overlies and
is supported by the first container.

15 8. A method according to claim 7, wherein, in the said
package, the open end of the second container corresponds
in both size and shape to the open end of the first
container and the containers are orientated with respect to
one another such that when the second container is flipped
20 over, by folding the said flange, from the first, storage
position into the said second, closure position it
substantially covers the whole of the open end of the first
container, thereby serving as a lid for the first
container.

25

9. A method according to claim 7, wherein, in the said
package, one or more further containers, in addition to the
first and second containers, are provided, the or each of

the second and other containers being connected to the first container by a foldable flange connection, each flange being common to the first and one of the or each other respective containers and the size and shape of the open end, and the orientation and position relative to the first container, of each of the second container and the or each further container, being such that in combination these containers are capable of serving as respective lid components together providing a lid for the first container when they are all flipped over into a position in which they overlie and are supported by the first container.

10. A method according to claim 3, wherein, in the package provided, the first and second containers assume a closure position which is the said first position, whereby prior to and during the cooking operation, the second container serves as a lid for the first container and, during the cooking operation, the sauce material flows from the lid to the first container.

20

11. A method according to claim 10, wherein the sealing means is removed from the first and second containers prior to the cooking operation.

25 12. A method according to claim 10, wherein the sealing means is removed from the first and second containers subsequently to the cooking operation.

13. A method according to any preceding claim, wherein the first food component is substantially raw.

14. A method of cooking food substantially as herein
5 described and exemplified.

15. A package comprising at least:
a first container having a closed end and an open end,
a second container having a closed end and an open
10 end,
the first and second containers being capable of
assuming at least a first, storage position relative to one
another in which respective interiors of the containers are
each releasably sealable from the atmosphere, and which
15 containers are additionally capable of assuming a closure
position which is at least one of the first position and a
second position, relative to one another, in which closure
position: (a) the second container overlies and is
supported by the first container, (b) the closed end of the
20 second container is disposed remote from the closed end of
the first container and (c) the open end of the second
container faces the closed end of the first container,
whereby the second container partly or wholly covers the
open end of the first container,
25 the first container containing a first food component
and the second container containing a second food
component,

the package including means for releasably sealing

from the atmosphere each said food component when the containers are in the said first, storage position, and the second food component being substantially solid and adhered to the internal surface of the second
5 container.

16. A package according to claim 15, wherein, when the first and second containers assume the said closure position relative to one another in which the second
10 container overlies and is supported by the first container, the second container is independently, or in combination with at least one additional closure element, capable of substantially closing the open end of the first container, whereby the second container, or the combination of the
15 second container and the or each additional closure element if applicable, serves as a lid or lid component for the first container.

17. A package according to claim 16, wherein
20 the second container is releasably held in the first, storage position in which the closed end of the second container is disposed within the first container and the open end of the second container lies remote from the closed end of the first container,
25 at least one of the first and second containers having a laterally extending flange, which said flange on one said container is capable of providing a support for the other container, whereby the closed end of the second container,

disposed within the first container, is spaced from the closed end of the first container so as to define a first food compartment containing the first food component and the second container defines a second food compartment
5 containing the second food component and

means for releasably holding the second container in the said first, storage position,

the said second container, after release thereof by the said holding means, being capable of assuming the
10 second, closure position in which the closed end of the second container is disposed remote from the closed end of the first container and the open end of the second container faces the closed end of the first container whereby the second container serves as a closure member for
15 the first container, the said flange on one said container being capable additionally of providing a support for the other container when the second container is in the said second, closure position.

20 18. A package according to claim 16, wherein each of the first and second containers has, at or adjacent the open end thereof, a flange extending laterally outwardly of the container.

25 19. A package according to claim 16, wherein the flange on one of the first and second containers is provided with at least one recess and the flange on the other of the first and second containers is provided with at least one

protrusion engageable within the or a respective said recess.

20. A package according to any one of claims 17 to 19,
5 wherein the means for sealing each said food compartment is a heat sealable film.

21. A package according to claim 20, wherein the means for sealing each of the said food compartments is a said heat
10 sealable film common to each of the first and second containers and secured to at least the first container, whereby the heat sealable film serves additionally as the means for releasably holding the second container in the said first, storage position.

15

22. A package according to any one of claims 17 to 21, wherein each of the first and second containers has a laterally extending flange at or adjacent its open end,
the flange of the first container being profiled so as
20 to provide a laterally inner step portion of the flange capable of receiving a laterally outermost step portion of the flange of the second container and the depth of the step portion of the profiled flange of the first container is greater than the thickness of the material of the flange
25 of the second container; and

the flange of the second container having a laterally outermost step portion cooperable with the step portion of the flange of the first container to locate and support the

second container in its first, storage position within the first container or, when the second container is in its second, closure position in which it serves as a closure member for the first container, cooperable to locate and
5 support the second container in this closure position.

23. A package according to claim 22, wherein the depth of the step portion of the profiled flange of the first container is twice as great as the thickness of the
10 material of the flange of the second container.

24. A package according to claim 20 or claim 23, wherein the profile of the flange of the second container is such that, when the second container is disposed with its open
15 end facing upwardly, the laterally outermost step portion depends downwardly from a laterally inner portion at the open end of the container and when the second container is inverted and assumes its closure position over the second container, the step portion and laterally inner portion
20 extend into the open end of the first container, thereby avoiding leakage between the flanges of the second food component as it falls into the first container.

25. A package according to any one of claims 22 to 24,
25 wherein the flanges of the first and second containers are each profiled so as to provide, respectively, a laterally outer portion of the flange of the first container and a laterally inner portion of the flange of the second

container each capable of contact with the releasable sealing means capable of sealing each of the first and second containers when the respective containers are in the first, storage position.

5

26. A package according to any one of claims 17 to 25, wherein each of the first and second containers has at least a respective pair of opposed lugs protruding laterally therefrom, the pairs of lugs on respective
10 containers being profiled so that respective pairs cooperate with one another to locate the first container in a fixed position relative to one another when the respective containers assume either of the said first, storage and second, closure positions.

15

27. A package according to claim 26, wherein each lug of the pair thereof of the first container has therein a recess capable of receiving a corresponding lug of the pair thereof of the second container.

20

28. A package according to claim 15 or claim 16, wherein, in the said first, storage position of the first and second containers, the first and second containers lie adjacent to one another and the open ends of the containers face in
25 generally the same direction,

the first and second containers being connected to one another by a connecting flange defining an edge portion common to the respective containers at open ends thereof,

the flange being foldable such that the second container can be inverted so as to assume the second, closure position relative to the first container, in which second position the second container overlies and is
5 supported by the first container.

29. A package according to claim 28, wherein the open end of the second container corresponds in both size and shape to the open end of the first container and the containers
10 are orientated with respect to one another such that when the second container is flipped over, by folding the said flange, into the said second, closure position it substantially covers the whole of the open end of the first container, thereby serving as a lid for the first
15 container.

30. A package according to claim 28, wherein one or more further containers, in addition to the first and second containers, are provided, the or each of the second and
20 other containers being connected to the first container by a foldable flange connection, each flange being common to the first and one of the or each other respective containers, the size shape of the open end, and the orientation and position relative to the first container,
25 of each of the second container and the or each further container, being selected such that in combination the containers are capable of serving as respective lid components together providing a lid for the first container

when they are all flipped over into the second, closure position in which they overlies and are supported by the first container.

- 5 31. A package according to any one of claims 28 to 30, wherein the connection between the first container and the second container and the connection(s) between the first container and any further container(s) included in the package take(s) the form of a hinge-type connection.
- 10 32. A package according to claim 31, wherein the or each connection between the or the respective containers is a flexible flange between open ends of each container.
- 15 33. A package according to claim 32, wherein the or each hinged flange includes retention means for securing the second and each of any other container optionally present in its second, closure position.
- 20 34. A package according to claim 33, wherein the retention means is provided by at least first and second engageable elements disposed one to each side of the hinge, one of which elements is capable of engaging and releasably retaining the other when the containers are arranged in the
- 25 second, closure position, thereby securing the said containers in that position relative to one another.
35. A package according to claim 33 or claim 34, wherein

at least one pair of the free edge portions of the first container and/or the second container and/or any further container is provided with one or more clip elements for securing the second container and/or the said any further
5 container in its/their respective second, closure positions in which respective edges of the containers cooperate with one another to effect closure.

36. A package according to any one of claims 28 to 35,
10 wherein, when the containers are in the said first, storage position, the open ends of the first and second containers, and that of any additional container, lie in substantially the same plane as one another and each open end has a flange around its perimeter to which releasable sealing
15 means are attached, such that the sealing means cover the open end of the container, whereby the interior of the container is releaseably sealed from the atmosphere.

37. A package according to claim 36, wherein each of the
20 containers of the package is sealed by a heat sealable film common to all containers.

38. A package comprising
a first, outer container having a closed end and an
25 open end,

a second, inner container having a closed end and an open end and releasably held in a first, storage position in which the closed end of the second, inner container is

disposed within the first, outer container and the open end of the second, inner container lies remote from the closed end of the first, outer container,

each of the first and second containers having, at or
5 adjacent to its open end, a laterally extending flange,
which said flange on one said container is capable of
providing a support for the other container, whereby the
closed end of the second, inner container, disposed within
the first, outer container, is spaced from the closed end
10 of the first, outer container so as to define a first food
compartment for a first food component and the open end of
the second, inner container allows dosage of a second food
component into the second, inner container thereby
providing a second food compartment and
15 means for releasably holding the second container in
the said first position,

the said second, inner container, after release
thereof by the said holding means, being capable of
assuming a second, closure position in which the closed end
20 of the second, inner container is disposed remote from the
closed end of the first, outer container and the open end
of the second, inner container faces the closed end of the
first, outer container whereby the second, inner container
serves as a closure member for the first, outer container,
25 the said flange on one said container being capable
additionally of providing a support for the other container
when the second container is in the said second, closure
position,

the flange of the first, outer container being profiled so as to provide a laterally inner step portion of the flange capable of receiving a laterally outermost step portion of the flange of the second, inner container and
5 the depth of the step portion of the profiled flange of the first, outer container being greater than the thickness of the material of the flange of the second, inner container, and

the flange of the second, inner container having a
10 laterally outermost step portion cooperable with the step portion of the flange of the first, outer container to locate and support the second, inner container in its first, storage position within the first container or, when the second container is in its second, closure position in
15 which it serves as a closure member for the first container, cooperable to locate and support the second container in its second, closure position.

39. A package according to claim 38, wherein the depth of
20 the step portion of the profiled flange of the first container is twice as great as the thickness of the material of the flange of the second container.

40. A package according to claim 38 or claim 39, wherein
25 the profile of the flange of the second container is such that, when the second container is disposed with its open end facing upwardly, the laterally outermost step portion depends downwardly from a laterally inner portion at the

open end of the container and when the second container is inverted and assumes its closure position over the second container, the step portion and laterally inner portion extend into the open end of the first container, thereby
5 avoiding leakage between the flanges of the second food component as it falls into the first container.

41. A package according to any one of claims 38 to 40, wherein the flanges of the first and second containers are
10 each profiled so as to provide, respectively, a laterally outer portion of the flange of the first container and a laterally inner portion of the flange of the second container each capable of sealing each of the first and second containers when the respective containers are in the
15 first, storage position.

42. A package according to any one of claims 38 to 41, wherein each of the first and second containers has at least a respective pair of opposed lugs protruding
20 laterally therefrom, the pairs of lugs on respective containers being profiled so that respective pairs cooperate with one another to locate the first container in a fixed position relative to one another when the respective containers assume either of the said first,
25 storage and second, closure positions.

43. A package according to claim 42, wherein each lug of the pair thereof of the first container has therein a

recess capable of receiving a corresponding lug of the pair thereof of the second container.

44. A package according to any one of claims 15 to 43
5 substantially as herein described and exemplified.



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Claims searched: 1-14

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Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:
UK CI (Ed.O): B8C (CWA2), B8D (DSC2)
Int CI (Ed.6): B65D 81/32, 81/34
Other: ONLINE:WPI

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	GB 2221442 A (GERBER) whole document	1, 2, 10, 11
Y	GB 1053592 (PHILLIPS) lines 59-73 of page 3	7, 8
X, Y	WO 90/08710 A1 (STEVE'S HOMEMADE) whole document	X:1-5 Y:7, 8
X	US 4978022 (WEICK) whole document	1, 2, 10, 11

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